

### **REMARKS**

This responds to the Office Action mailed on January 6, 2004. Claims 1, 10, 15 and 23 have been amended. Claims 1-29 remain pending in this application. Reconsideration of the rejections and of the claims is respectfully solicited.

#### **Objection to the Abstract**

The abstract was objected to because it was too short. According to the Guidelines for the Preparation of Abstracts in MPEP § 608.01(b), the abstract should be limited to be within the range of 50 - 250 words. Applicant has extended the abstract to exceed 50 words.

#### **§102 Rejection of the Claims**

Claims 1-29 were rejected under 35 U.S.C. § 102(e) as being anticipated by Thomas et al. (U.S. 6,141,393). Applicant does not admit that the Thomas et al. patent is prior art to the present patent application and reserves the right to swear behind the Thomas et al. patent at a later date. At this time, Applicant chooses to distinguish the Thomas et al. patent. Applicant respectfully submits that this rejection under 35 U.S.C. § 102(e) is no longer proper since all the elements of claims 1-29 are not found in the single reference to Thomas et al.

The Thomas et al. patent describes a complex receiver system which uses multiple RF paths (Thomas et al, col. 7, lines 1-3). The channel estimation device of the Thomas et al. patent operates at the RF side of the receiver (Thomas et al., Figure 2, element 208, col. 7, lines 4-8, etc.)

In contrast to the Thomas et al. patent, the presently claimed invention greatly simplifies CDMA receiver design by requiring only a single RF path (e.g., one intermediate frequency (IF) section, one analog to digital converter, etc.) within the receiver system. Multiple antenna elements are used with conventional phased array principles to control the receive beam. The outputs of the multiple antenna elements are combined before the RF stage so only a single RF path is needed within the receiver system even though multiple antenna elements are being used. Any number of antenna elements can be used as long as at least one of the antenna elements has a variable magnitude and/or phase to allow beam steering to occur.

Independent method claims 1, 10 and 15 and independent apparatus claim 23 have been amended to distinguish over the Thomas et al. patent by including a description or circuit for combining the RF signals from the antenna ahead of the RF receiver and determining the estimation factors in the baseband domain. Further, the claims describe the use of beam steering as the technique used to maximize the received signal. These elements are not found in the Thomas et al. patent.

The dependent claims of the present patent application also contain limitations which further distinguish over the Thomas et al. patent. For example, and not by way of limitation, claims 19 and 20 were rejected as being inherently found in the Thomas et al. patent. Applicant has been unable to determine where this inherency lies and therefore traverses this statement. Since this is taking Official Notice of elements of claims 19 and 20 which are not found in the claims, Applicant respectfully requests that the Examiner substantiate the Official Notice by citing a reference which supports this conclusion. Applicant traverses the rejections of all the dependent claims of this patent application.

Since all of the elements of claims 1-29 are not found in the Thomas et al. patent, the rejection of these claims under 35 U.S.C. 102(b) §102 (e) fails. Reconsideration of the rejections and of the claims is respectfully solicited.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 373-6904) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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Date

May 6, 2004

By

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6 day of May, 2004.

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Name

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Signature